

TOP 5 WEATHER EVENTS OF 2016



National Weather Service – Billings, MT

These weather events were voted upon by several of our meteorologists and deemed the five most intriguing in our forecast area. Obviously, there were several other impactful weather events that occurred throughout the course of the year. Enjoy!

#5: August 9: Four Inch Diameter Hail at Ridgeway

A severe thunderstorm produced VERY large hail (up to a whopping 4" diameter, or roughly the size of a grapefruit) near Ridgeway. A funnel cloud was also spotted. The hail caused a path of damage including: car and window damage, damage to house siding, damage to pasture ground, a destroyed calving shed. Also, a local rainfall of up to 3 inches was reported with this storm.



Photo courtesy of Brandon Copic



Photo courtesy of Georgia Bruski



Photo courtesy of Richards



Photo courtesy of Georgia Bruski

#4: April 24: Nocturnal Thunderstorm with Hail & Flash Flooding in Miles City

A nighttime thunderstorm between 2:00 and 4:00 am produced very heavy rainfall and small hail in Miles City, causing urban flooding. Over 2 inches of rain fell in just over an hour, a remarkable rainfall rate for early spring. The Miles City airport received a total of 2.91 inches of rain on the 24th, establishing **a new all-time record daily precipitation**, for any time of year!

Top 5 Wettest Days @ Miles City

1. 2.91" 4/24/2016
2. 2.71" 6/18/1964
3. 2.67" 9/7/1941
4. 2.45" 6/7/1993
5. 2.30" 5/17/1978



#3: May 21: Severe Thunderstorm with Damaging Hail and Strong winds at Billings



The first severe weather event of the season was a significant one. On this day, an EF-1 tornado touched down about 16 miles north of Pompey's Pillar (150 yards wide with a path length of 2 miles), and significant straight line wind damage occurred north of Hysham (snapping or uprooting about 50 trees, and destroying a small garage).

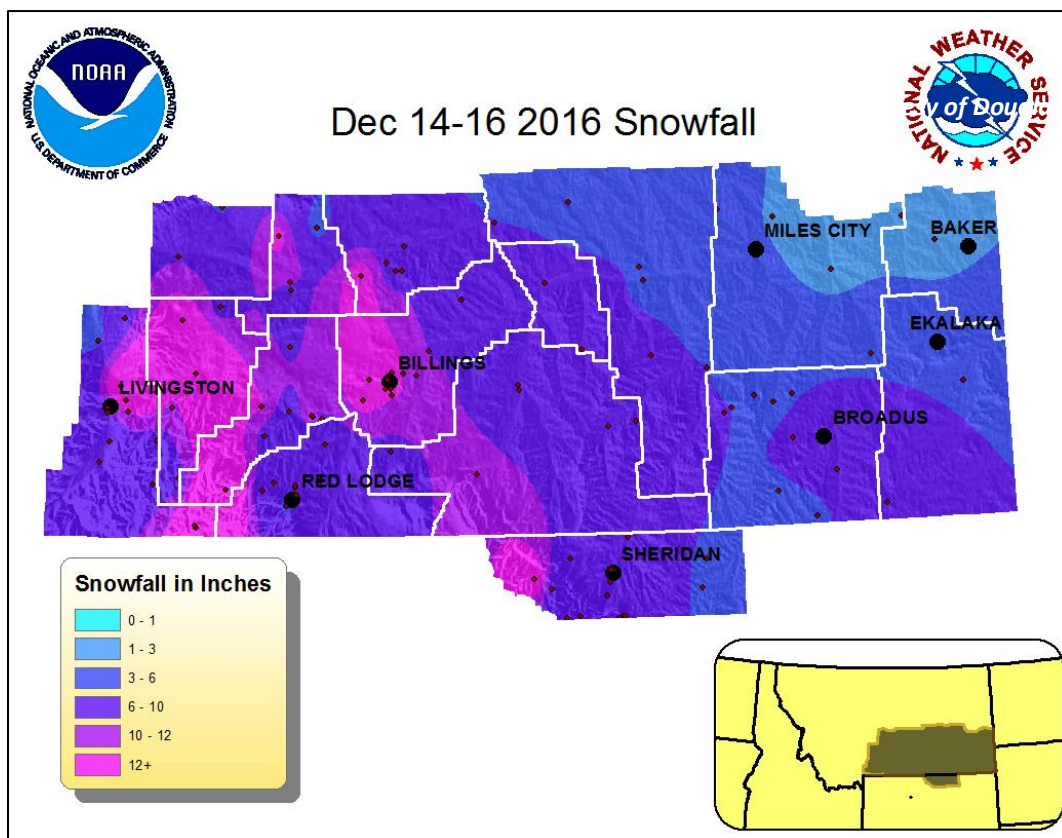
However, the storm with the biggest impact moved through Billings during the mid afternoon. For the 2nd time in 3 years, large hail caused significant house and car damage across much of the metro area. The largest hail was estimated to be about the size of a hen egg (2" diameter) and the peak wind gust at the Billings airport was 66 mph. Three people were injured by large hail at the Rod and Gun Club just west of the airport.



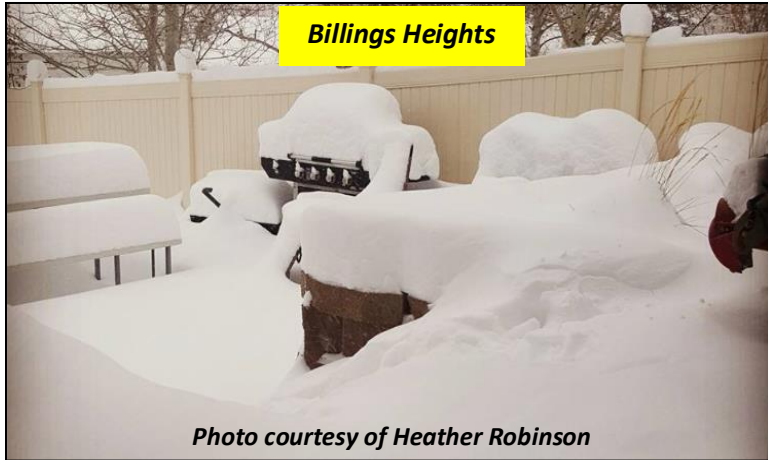
#2: December 14-19: Heavy Snow, Cold then Wind and Blizzard Conditions

A remarkable winter storm impacted the region in mid-December, bringing a combination of heavy snowfall and very cold temperatures. As the cold air began its retreat, strong winds developed along the foothills causing ground blizzard conditions.

SNOW: The entire region received at least some snowfall, but the snow was very heavy from Billings westward, especially on the 15-16th. Big Timber received up to 23 inches of snow, Mystic Lake 20 inches, Clyde Park 19 inches, Billings 12-17 inches, Springdale 16 inches, Roundup 13SW 15 inches, Livingston 14 inches, Columbus 13 inches. Public schools in Billings were closed on the 16th due to heavy snowfall. The total of 16.9 inches at the Billings airport on the 15-16th was the 5th highest two-day snowfall since records began in 1934.



COLD: The coldest air yet of the winter impacted the region on the 16-17th. Temperatures fell well below zero on the morning of the 17th, including: Dayton -35, Columbus & Mizpah -34, Brandenburg -33, Busby -31, Plevna & Hardin -30, Big Timber -29, Livingston & Miles City -27, Red Lodge -26, Sheridan -25, Billings -19.



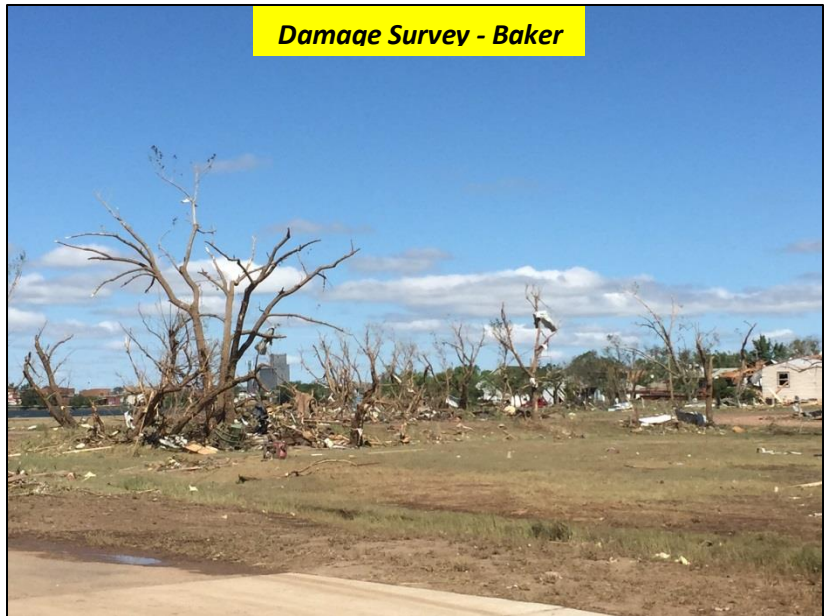
WIND: The most severe impact occurred after the winter storm departed and temperatures began to moderate. Strong winds developed along the foothills on the 18-19th, and this combined with the recently fallen powdery snow to produce significant blowing and drifting snow (a ground blizzard) in some areas. This included Interstate 90 which was closed from Livingston to Park City for about 27 hours. Other smaller roads across Park and Sweet Grass Counties were drifted over and impassable. Peak wind gusts included: Livingston 83 mph, Nye 74 mph & Big Timber 72 mph.



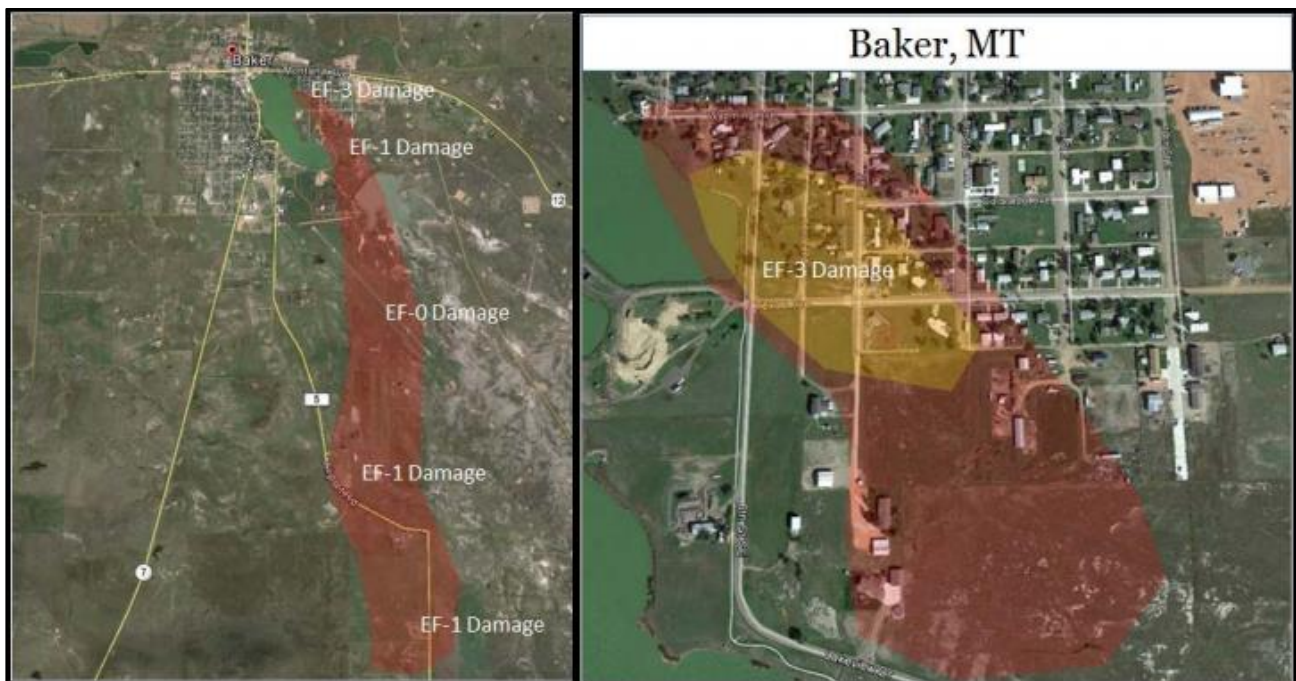
#1: June 11: Baker Tornado

The number one weather event of 2016 was the EF-3 tornado that struck Baker during the evening of June 11th. This tornado caused significant damage to several homes (10 homes were destroyed & 30 additional homes sustained minor to moderate damage). The most severe damage occurred in about a square block area, in a subdivision just northeast of Baker Lake, where the tornado was reported as being nearly stationary for a short period of time. Based on the damage observed, peak

winds were estimated to be 136-165 mph. Other damage included: a steel-framed barn destroyed, 3 RVs destroyed, several horses were killed. There were no fatalities from this tornado.



A damage survey was conducted by the National Weather Service, and it was determined that the onset of damage occurred approximately 3 miles south of Baker, with periodic damage along a northward path through the Baker Municipal Airport to just northeast of Baker Lake. There was not a continuous path of damage and eyewitness reports indicate that the circulation on the ground likely



lifted and reformed at times with multiple circulations occurring at the same time. The tornado eventually shifted over Baker Lake where it dissipated.



Photo courtesy of Kelly DeLay

Scientific Information: The pre-storm environment for eastern Montana was such that severe weather was likely on the afternoon and evening of June 11th. The existence of a surface trough and generation of nearby convergent boundaries, along with the moisture-rich and unstable air mass, were important in producing this tornadic storm.



Damage Survey - Baker



Figure 10: Aerial Photo of EF-3 Damage in Baker, MT
Courtesy Roger Meggers